
OBSERVATIONS & RECOMMENDATIONS

After reviewing data collected from **LOWER MOUNTAIN LAKE AND UPPER MOUNTAIN LAKE, HAVERHILL** the program coordinators have made the following observations and recommendations:

We would like to thank your group for sampling your lake/pond **once** this summer. However, we encourage your monitoring group to sample **additional** times each summer. Typically we recommend that monitoring groups sample **three times** per summer (once in **June, July, and August**). We understand that the number of sampling events you decide to conduct per summer will depend upon volunteer availability, and your monitoring group's water monitoring goals and funding availability. However, with a limited amount of data it is difficult to determine accurate and representative water quality trends. Since weather patterns and activity in the watershed can change throughout the summer, from year to year, and even from hour to hour during a rain event, it is a good idea to sample the lake/pond at least once per month over the course of the season.

If you are having difficulty finding volunteers to help sample, or to pick-up or drop-off equipment at one of the laboratories, please give the VLAP Coordinator a call and we will try to help you work out an arrangement.

We would like to encourage your monitoring group to formally participate in the DES Weed Watchers program, a volunteer program dedicated to monitoring the lakes and ponds for the presence of exotic aquatic plants. This program only involves a small amount of time during the summer months. Volunteers survey their waterbody once a month from **June** through **September**. To survey, volunteers slowly boat, or even snorkel, around the perimeter of the waterbody and any islands it may contain. Using the materials provided in the Weed Watchers Kit, volunteers look for any species that are of suspicion. After a trip or two around the waterbody, volunteers will have a good knowledge of its plant community and will immediately notice even the most subtle changes. If a suspicious plant is found, the volunteers will send a specimen to DES for identification. If the plant specimen is an exotic, a biologist will visit the site to determine the extent of the problem and to formulate a plan of action to control the nuisance infestation.

Remember that early detection is the key to controlling the spread of exotic plants.

If you would like to help protect your lake or pond from exotic plants, contact Amy Smagula, Exotic Species Program Coordinator, at 271-2248 or visit the Weed Watchers web page at www.des.state.nh.us/wmb/exoticspecies/survey.htm.

FIGURE INTERPRETATION

- **Figure 1 and Table 1:** The graphs in Figure 1 (Appendix A) show the historical and current year chlorophyll-a concentration in the water column. Table 1 (Appendix B) lists the maximum, minimum, and mean concentration for each sampling season that the lake/pond has been monitored through the program.

Chlorophyll-a, a pigment found in plants, is an indicator of the algal abundance. Because algae are usually microscopic plants that contain chlorophyll-a, and are naturally found in lake ecosystems, the chlorophyll-a concentration measured in the water gives an estimation of the algal concentration or lake productivity. **The mean (average) summer chlorophyll-a concentration for New Hampshire's lakes and ponds is 7.02 mg/m³.**

LOWER AND UPPER MOUNTAIN LAKES

The current year data (the top graph) show that the chlorophyll-a concentration in **August** was ***much less than*** the state mean.

Overall, visual inspection of the historical data trend line (the bottom graph) for the deep spots in each lake shows a ***variable, but overall slightly decreasing***, in-lake chlorophyll-a trend since monitoring began. Specifically the concentration has ***fluctuated***, but has ***improved overall*** since monitoring began in the early 1990s. Please keep in mind that this trend is based on limited data.

As your group expands its sampling program to include additional events each year/continues to collect data we will be able to determine trends with more accuracy and confidence. After 10 consecutive years of sample collection, we will be able to conduct a statistical analysis of the historical data to objectively determine if there has been a significant change in the annual mean chlorophyll-a concentration since monitoring began. (Please note that each of the lakes was not sampled in 1994 or 1996, therefore, it was not possible to conduct a regression analysis of the historic data this year.)

While algae are naturally present in all lakes/ponds, an excessive or increasing amount of any type is not welcomed. In freshwater lakes/ponds, phosphorus is the nutrient that algae depend upon for growth. Algal concentrations may increase with an increase in nonpoint sources of phosphorus loading from the watershed, or in-lake sources of phosphorus loading (such as phosphorus releases from the sediments). Therefore, it is extremely important for volunteer monitors to continually educate residents about how activities within the watershed can affect phosphorus loading and lake/pond quality.

- **Figure 2 and Table 3:** The graphs in Figure 2 (Appendix A) show historical and current year data for lake/pond transparency. Table 3 (Appendix B) lists the maximum, minimum and mean transparency data for each sampling season that the lake/pond has been monitored through the program.

Volunteer monitors use the Secchi-disk, a 20 cm disk with alternating black and white quadrants, to measure water clarity (how far a person can see into the water). Transparency, a measure of water clarity, can be affected by the amount of algae and sediment from erosion, as well as the natural colors of the water. **The mean (average) summer transparency for New Hampshire's lakes and ponds is 3.7 meters.**

LOWER MOUNTAIN LAKE

The current year data (the top graph) show that the in-lake transparency in **August** was **greater than** the state mean.

Overall, visual inspection of the historical data trend line (the bottom graph) shows an **increasing** trend for in-lake transparency, meaning that the transparency has **improved** since monitoring began in **1991**. As previously discussed, after 10 consecutive years of sample collection, we will be able to conduct a statistical analysis of the historical data to objectively determine if there has been a significant change in the annual mean transparency since monitoring began. (Again, please note that the lake was not sampled in 1994 or 1996.)

UPPER MOUNTAIN LAKE

The current year data (the top graph) show that the in-lake transparency in **August** was **slightly greater than** the state mean.

Overall, visual inspection of the historical data trend line (the bottom graph) shows a **relatively stable** trend for in-lake transparency, ranging **between approximately 2.5 and 4 meters**, since

monitoring began in **1990**. It is important to point out that the transparency measured on the **August** sampling event this year was the **best (meaning deepest)** transparency that has been observed at the **UPPER MOUNTAIN LAKE** deep spot since monitoring began.

Typically, high intensity rainfall causes erosion of sediments into lakes/ponds and streams, thus decreasing clarity. Efforts should continually be made to stabilize stream banks, lake/pond shorelines, disturbed soils within the watershed, and especially dirt roads located immediately adjacent to the edge of tributaries and the lake/pond. Guides to Best Management Practices designed to reduce, and possibly even eliminate, nonpoint source pollutants, such as sediment loading, are available from DES upon request.

- **Figure 3 and Table 8:** The graphs in Figure 3 (Appendix A) show the amounts of phosphorus in the epilimnion (the upper layer) and the hypolimnion (the lower layer); the inset graphs show current year data. Table 8 (Appendix B) lists the annual maximum, minimum, and median concentration for each deep spot layer and each tributary since the lake/pond has joined the program.

Phosphorus is the limiting nutrient for plant and algae growth in New Hampshire's freshwater lakes and ponds. Too much phosphorus in a lake/pond can lead to increases in plant and algal growth over time. **The median summer total phosphorus concentration in the epilimnion (upper layer) of New Hampshire's lakes and ponds is 12 ug/L. The median summer phosphorus concentration in the hypolimnion (lower layer) is 14 ug/L.**

LOWER MOUNTAIN LAKE

The current year data for the epilimnion (the top inset graph) and the hypolimnion (the bottom inset graph) show that the phosphorus concentration in **August** was **less than** the state median.

The turbidity of the hypolimnion (lower layer) sample was **elevated** on the **August** sampling event (**7.63 NTUs**). This suggests that the lake/pond bottom may have been disturbed by the anchor or by the Kemmerer Bottle while sampling and/or that the lake bottom is covered by a thick organic layer of sediment which is easily disturbed. When the lake/pond bottom is disturbed, sediment, which typically contains attached phosphorus, is released into the water column. When collecting the hypolimnion sample, make sure that there is no sediment in the Kemmerer Bottle before filling the sample bottles.

Overall, visual inspection of the historical data trend line for the epilimnion and hypolimnion shows a **variable** phosphorus trend.

Specifically the epilimnetic concentration has ***fluctuated between approximately 5 and 12 ug/L***, and the hypolimnetic concentration has ***fluctuated between approximately 5 and 18 ug/L***, since monitoring began in **1991**.

UPPER MOUNTAIN LAKE

The current year data for the epilimnion (the top inset graph) and hypolimnion (bottom inset graph) show that the phosphorus concentration in **August** was ***less than*** the state median.

Overall, visual inspection of the historical data trend line for the epilimnion and hypolimnion shows a ***variable*** phosphorus trend since monitoring began. Specifically the epilimnetic concentration has ***fluctuated between approximately 6 and 17 ug/L***, and the hypolimnetic phosphorus concentration has fluctuated between ***approximately 6 and 27 ug/L*** since 1990.

One of the most important approaches to reducing phosphorus loading to a waterbody is to continually educate watershed residents about its sources and how excessive amounts can adversely impact the ecology and value of lakes and ponds. Phosphorus sources within a lake or pond's watershed typically include septic systems, animal waste, lawn fertilizer, road and construction erosion, and natural wetlands.

TABLE INTERPRETATION

➤ **Table 2: Phytoplankton**

Table 2 (Appendix B) lists the current and historical phytoplankton species observed in the lake/pond. Specifically, this table lists the three most dominant phytoplankton species observed in the sample and their relative abundance in the sample. In addition, this table has been enhanced this year to include the overall phytoplankton cell abundance rating of the sample. The overall phytoplankton cell abundance in a sample is calculated using a formula based on the relationship that DES biologists have observed over the years regarding phytoplankton concentrations, algal concentrations, and biological productivity in New Hampshire's lakes and ponds. A mathematical equation is used to classify the overall abundance of phytoplankton cells in a sample into the following categories: *sparse*, *scattered*, *moderate*, *common*, *abundant*, and *very abundant*. Generally, the more phytoplankton cells there are in a sample, the higher the chlorophyll concentration and the higher the biological productivity of the lake.

LOWER MOUNTAIN LAKE

The dominant phytoplankton species observed in the **August** sample were ***Dinobryon*** (golden-brown), ***Asterionella*** (diatom), and ***Anabaena*** (cyanobacteria).

The overall abundance of rating phytoplankton cells in the sample was calculated to be ***sparse***.

UPPER MOUNTAIN LAKE

The dominant phytoplankton species observed in the **August** sample were ***Rhizosolenia*** (diatom), ***Dinobryon*** (golden-brown), and ***Gleocystis*** (green).

The overall abundance of rating phytoplankton cells in the sample was calculated to be ***moderate***.

Phytoplankton populations undergo a natural succession during the growing season (Please refer to the “Biological Monitoring Parameters” section of this report for a more detailed explanation regarding seasonal plankton succession). Diatoms and golden-brown algae are typical in New Hampshire’s less productive lakes and ponds.

➤ **Table 2: Cyanobacteria**

The cyanobacterium ***Anabaena*** was the third-most dominant species in the **LOWER MOUNTAIN LAKE** plankton sample this season. In addition, small amounts of the cyanobacterium ***Oscillatoria*** was present in the **LOWER MOUNTAIN LAKE** and **UPPER MOUNTAIN LAKE** plankton samples.

These species, if present in large amounts, can be toxic to livestock, wildlife, pets, and humans. (Please refer to the “Biological Monitoring Parameters” section of this report for a more detailed explanation regarding cyanobacteria).

Cyanobacteria can reach nuisance levels when phosphorus loading from the watershed to surface waters is increased (this is often caused by rain events) and favorable environmental conditions occur (such as a period of sunny, warm weather).

The presence of cyanobacteria serves as a reminder of the lake’s/pond’s delicate balance. Watershed residents should continue to act proactively to reduce nutrient loading to the lake/pond by eliminating fertilizer use on lawns, keeping the lake/pond shoreline natural, re-vegetating cleared areas within the watershed, and properly maintaining septic systems and roads.

In addition, residents should also observe the lake/pond in September and October during the time of fall turnover (lake mixing) to document any algal blooms that may occur. Cyanobacteria have the ability to regulate their depth in the water column by producing or releasing gas from vesicles. However, occasionally lake mixing can affect their buoyancy and cause them to rise to the surface and bloom. Wind and currents tend to “pile” cyanobacteria into scums that accumulate in one section of the lake/pond. If a fall bloom occurs, please collect a sample (any clean jar or bottle will be suitable) and contact the VLAP Coordinator.

➤ **Table 4: pH**

Table 4 (Appendix B) presents the in-lake and tributary current year and historical pH data.

pH is measured on a logarithmic scale of 0 (acidic) to 14 (basic). pH is important to the survival and reproduction of fish and other aquatic life. A pH below 6.0 limits the growth and reproduction of fish. A pH between 6.0 and 7.0 is ideal for fish. The mean pH value for the epilimnion (upper layer) in New Hampshire’s lakes and ponds is **6.6**, which indicates that the surface waters in the state are slightly acidic. For a more detailed explanation regarding pH, please refer to the “Chemical Monitoring Parameters” section of this report.

The pH at the deep spot this season ranged from **6.43** in the hypolimnion to **7.12** in the epilimnion of **LOWER MOUNTAIN LAKE**, and ranged from **6.69** in the hypolimnion to **7.00** in the epilimnion of **UPPER MOUNTAIN LAKE**. This means that the water is **slightly acidic** near the bottom of each lake and **approximately neutral** near the surface of each lake.

It is important to point out that the pH in the hypolimnion (lower layer) was **lower (more acidic)** than in the epilimnion (upper layer). This increase in acidity near the lake bottom is likely due the decomposition of organic matter and the release of acidic by-products into the water column.

Due to the presence of granite bedrock in the state and acid deposition (from snowmelt, rainfall, and atmospheric particulates) in New Hampshire, there is not much that can be done to effectively increase lake/pond pH.

➤ **Table 5: Acid Neutralizing Capacity**

Table 5 (Appendix B) presents the current year and historical epilimnetic ANC for each year the lake/pond has been monitored through VLAP.

Buffering capacity (ANC) describes the ability of a solution to resist changes in pH by neutralizing the acidic input. The mean ANC value for New Hampshire's lakes and ponds is **6.6 mg/L**, which indicates that many lakes and ponds in the state are at least "moderately vulnerable" to acidic inputs. For a more detailed explanation, please refer to the "Chemical Monitoring Parameters" section of this report.

The Acid Neutralizing Capacity (ANC) of the epilimnion (the upper layer) was **12.2 mg/L** in **LOWER MOUNTAIN LAKE** and **15.5 mg/L** in **UPPER MOUNTAIN LAKE**, both of which are *greater than* the state mean. In addition, this indicates that the each lake is *moderately vulnerable* to acidic inputs (such as acid precipitation).

➤ **Table 6: Conductivity**

Table 6 (Appendix B) presents the current and historical conductivity values for tributaries and in-lake data. Conductivity is the numerical expression of the ability of water to carry an electric current (which is determined by the number of negatively charged ions from metals, salts, and minerals in the water column). The mean conductivity value for New Hampshire's lakes and ponds is **59.4 uMhos/cm**. For a more detailed explanation, please refer to the "Chemical Monitoring Parameters" section of this report.

The epilimnetic conductivity at the deep spot of **LOWER MOUNTAIN LAKE** was **90.47 uMhos/cm** and of **UPPER MOUNTAIN LAKE** was **101.80 uMhos/cm**, both of which are *greater than* the state mean.

The conductivity has *increased* in the lake/pond and inlets since monitoring began. Typically, sources of increased conductivity are due to human activity. These activities include septic systems, agricultural runoff, and road runoff (which contains road salt during the spring snow melt). New development in the watershed can alter runoff patterns and expose new soil and bedrock areas, which could contribute to increasing conductivity. In addition, natural sources, such as iron and manganese deposits in bedrock, can influence conductivity.

We recommend that your monitoring group conduct stream surveys and storm event sampling along the inlet(s) with *elevated* conductivity (in particular, **Monteau Inlet**) so that we can determine potential sources of elevated conductivity to the lake.

For a detailed explanation on how to conduct rain event sampling and stream surveys, please refer to the 2002 VLAP Annual Report “Special Topic Article” or contact the VLAP Coordinator.

We also recommend that your monitoring group conduct a shoreline conductivity survey of the lake and the tributaries with **elevated** conductivity to help pinpoint the sources of **elevated** conductivity.

To learn how to conduct a shoreline or tributary conductivity survey, please refer to the 2004 “Special Topic Article” in Appendix D of this report.

It is possible that de-icing materials applied to nearby roadways during the winter months may be influencing the conductivity in the lake/pond. In New Hampshire, the most commonly used de-icing material is salt (sodium chloride).

Therefore, we recommend that the **epilimnion** (upper layer) be sampled for chloride next season. We also recommend that your monitoring group sample the major inlets to the lake/pond to determine the conductivity and chloride levels of the streamflow to the pond. This sampling may help us pinpoint what areas of the watershed are contributing to the increasing in-lake conductivity.

Please note that there will be an additional cost for each of the chloride samples but that these samples must be analyzed at the DES laboratory in Concord. In addition, it is best to conduct chloride sampling in the spring soon after the snow has melted.

In addition, please read this year’s Special Topic Article, “Conductivity is on the rise in New Hampshire’s Lakes and Ponds: What is causing the increase and what can be done?” which is found in Appendix D of this report. This article may help your association understand what types of activities can lead to elevated conductivity and chloride levels and what residents can do to minimize this type of pollution.

➤ **Table 8: Total Phosphorus**

Table 8 (Appendix B) presents the current year and historical total phosphorus data for in-lake and tributary stations. Phosphorus is the nutrient that limits the algae’s ability to grow and reproduce. Please refer to the “Chemical Monitoring Parameters” section of this report for a more detailed explanation.

The **Outlet** of **UPPER MOUNTAIN LAKE** was sampled for phosphorus on the **August** sampling event. The result was **5 ug/L**, which is **very low**.

➤ **Table 9 and Table 10: Dissolved Oxygen and Temperature Data**

Table 9 (Appendix B) shows the dissolved oxygen/temperature profile(s) for the 2004 sampling season. Table 10 (Appendix B) shows the historical and current year dissolved oxygen concentration in the hypolimnion (lower layer). The presence of dissolved oxygen is vital to fish and amphibians in the water column and also to bottom-dwelling organisms. Please refer to the “Chemical Monitoring Parameters” section of this report for a more detailed explanation.

The dissolved oxygen concentration continued to be **lower in the hypolimnion (lower layer) than in the epilimnion (upper layer)** at the deep spot of **UPPER MOUNTAIN LAKE** and **LOWER MOUNTAIN LAKE**. As stratified lakes/ponds age, and as the summer progresses, oxygen typically becomes **depleted** in the hypolimnion by the process of decomposition. Specifically, the loss of oxygen in the hypolimnion results primarily from the process of biological breakdown of organic matter (i.e.; biological organisms use oxygen to break down organic matter), both in the water column and particularly at the bottom of the lake/pond where the water meets the sediment. When oxygen levels are depleted to less than 1 mg/L in the hypolimnion (**as it was this season and in past seasons**), the phosphorus that is normally bound up in the sediment may be re-released into the water column (a process referred to as **internal phosphorus loading**).

The **low** oxygen level in the hypolimnion is a sign of the lake’s/pond’s **aging** and **declining** health. This year the DES biologist conducted the temperature/dissolved oxygen profile in **AUGUST**. We recommend that the annual biologist visit for the 2005 sampling season be scheduled during **JUNE or JULY** so that we can determine if oxygen is depleted in the hypolimnion **earlier** in the sampling season.

➤ **Table 11: Turbidity**

Table 11 (Appendix B) lists the current year and historical data for in-lake and tributary turbidity. Turbidity in the water is caused by suspended matter, such as clay, silt, and algae. Water clarity is strongly influenced by turbidity. Please refer to the “Other Monitoring Parameters” section of this report for a more detailed explanation.

As discussed previously, the turbidity of the hypolimnion (lower layer) sample was **elevated** in the **LOWER MOUNTAIN LAKE** on the **August** sampling event. This suggests that the lake/pond bottom may have been disturbed by the anchor or by the Kemmerer Bottle while sampling and/or that the lake bottom is covered by a thick organic layer of sediment which is easily disturbed. When the lake/pond bottom is disturbed, sediment, which typically contains attached

phosphorus, is released into the water column. When collecting the hypolimnion sample, make sure that there is no sediment in the Kemmerer Bottle before filling the sample bottles.

➤ **Table 12: Bacteria (*E.coli*)**

Table 12 lists the current year and historical data for bacteria (*E.coli*) testing. (Please note that Table 12 now lists the maximum and minimum results for this season and for all past sampling seasons.) *E. coli* is a normal bacterium found in the large intestine of humans and other warm-blooded animals. *E.coli* is used as an indicator organism because it is easily cultured and its presence in the water, in defined amounts, indicates that sewage **MAY** be present. If sewage is present in the water, potentially harmful disease-causing organisms **MAY** also be present.

The *E. coli* concentration was **very low** at the **UPPER MOUNTAIN LAKE Beach** and the **LOWER MOUNTAIN LAKE Beach** on the **August** sampling event. Specifically, each result was **2 counts or less**, which is ***much less than*** the state standard of 88 counts per 100 mL for surface waters that are designated public beaches.

If residents are concerned about sources of bacteria such as failing septic systems, animal waste, or waterfowl waste, it is best to conduct *E. coli* testing when the water table is high, when beach use is heavy, or immediately after rain events.

➤ **Table 14: Current Year Biological and Chemical Raw Data**

This table is a new addition to the Annual Report. This table lists the most current sampling season results. Since the maximum, minimum, and annual mean values for each parameter are not shown on this table, this table displays the current year “raw” (meaning unprocessed) data. The results are sorted by station, depth zone (epilimnion, metalimnion, and hypolimnion) and parameter.

➤ **Table 15: Station Table**

This table is a new addition to the Annual Report. As of the Spring of 2004, all historical and current year VLAP data are included in the DES Environmental Monitoring Database (EMD). To facilitate the transfer of VLAP data into the EMD, a new station identification system had to be developed. While volunteer monitoring groups can still use the sampling station names that they have used in the past (and are most familiar with), an EMD station name also exists for each VLAP sampling location. For each station sampled at your lake or pond, Table 15 identifies what EMD station name corresponds to

the station names you have used in the past and will continue to use in the future.

DATA QUALITY ASSURANCE AND CONTROL

Annual Assessment Audit:

This was the first season that your particular group took over the sampling activities at the lake. Therefore, the Biologist trained your group how to collect samples on the August sampling event. Overall, your monitoring group did an **excellent** job collecting samples on the annual biologist visit this season! Specifically, the members of your monitoring group followed the proper field sampling procedures. Keep up the good work!

USEFUL RESOURCES

Acid Deposition Impacting New Hampshire's Ecosystems, NHDES Fact Sheet ARD-32, (603) 271-2975 or www.des.state.nh.us/factsheets/ard/ard-32.htm.

Best Management Practices to Control Nonpoint Source Pollution: A Guide for Citizens and Town Officials, NHDES Booklet WD-03-42, (603) 271-2975.

Best Management Practices for Well Drilling Operations, NHDES Fact Sheet WD-WSEB-21-4, (603) 271-2975 or www.des.nh.gov/factsheets/ws/ws-21-4.htm.

Canada Geese Facts and Management Options, NHDES Fact Sheet BB-53, (603) 271-2975 or www.des.state.nh.us/factsheets/bb/bb-53.htm.

Cyanobacteria in New Hampshire Waters Potential Dangers of Blue-Green Algae Blooms, NHDES Fact Sheet WMB-10, (603) 271-2975 or www.des.state.nh.us/factsheets/wmb/wmb-10.htm.

Erosion Control for Construction in the Protected Shoreland Buffer Zone, NHDES Fact Sheet WD-SP-1, (603) 271-2975 or www.des.state.nh.us/factsheets/sp/sp-1.htm.

Freshwater Jellyfish In New Hampshire, NHDES Fact Sheet WD-BB-5, (603) 271-2975 or www.des.state.nh.us/factsheets/bb/bb-51/htm.

Impacts of Development Upon Stormwater Runoff, NHDES Fact Sheet WD-WQE-7, (603) 271-2975 or www.des.state.nh.us/factsheets/wqe/wqe-7.htm.

IPM: An Alternative to Pesticides, NHDES Fact Sheet WD-SP-3, (603) 271-2975 or www.des.state.nh.us/factsheets/sp/sp-3.htm.

Iron Bacteria in Surface Water, NHDES Fact Sheet WD-BB-18, (603) 271-2975 or www.des.state.nh.us/factsheets/bb/bb-18.htm.

Lake Foam, NHDES Fact Sheet WD-BB-4, (603) 271-2975 or www.des.state.nh.us/factsheets/bb/bb-5.htm.

Lake Protection Tips: Some Do's and Don'ts for Maintaining Healthy Lakes, NHDES Fact Sheet WD-BB-9, (603) 271-2975 or www.des.state.nh.us/factsheets/bb/bb-9.htm.

Proper Lawn Care In the Protected Shoreland, The Comprehensive Shoreland Protection Act, NHDES Fact Sheet WD-SP-2, (603) 271-2975 or www.des.state.nh.us/factsheets/sp/sp-2.htm.

Road Salt and Water Quality, NHDES Fact Sheet WD-WMB-4, (603) 271-2975 or www.des.state.nh.us/factsheets/wmb/wmb-4.htm.

Sand Dumping - Beach Construction, NHDES Fact Sheet WD-BB-15, (603) 271-2975 or www.des.state.nh.us/factsheets/bb/bb-15.htm.

Shorelands Under the Jurisdiction of the Comprehensive Shoreland Protection Act, NHDES Fact Sheet SP-4, (603) 271-2975 or www.des.state.nh.us/factsheets/sp/sp-4.htm.

Soil Erosion and Sediment Control on Construction Sites, NHDES Fact Sheet WQE-6, (603) 271-2975 or www.des.state.nh.us/factsheets/wqe/wqe-6.htm.

Swimmers Itch, NHDES Fact Sheet WD-BB-2, (603) 271-2975 or www.des.state.nh.us/factsheets/bb/bb-2.htm.

Through the Looking Glass: A Field Guide to Aquatic Plants, North American Lake Management Society, 1988, (608) 233-2836 or www.nalms.org.

Weed Watchers: An Association to Halt the Spread of Exotic Aquatic Plants, NHDES Fact Sheet WD-BB-4, (603) 271-2975 or www.des.state.nh.us/factsheets/bb/bb-4.htm.